CLAIMS

It is claimed:

1. A process for plating a component for a shopping cart or carrying conveyance, the process comprising the steps of:

cleaning the component by a cleaning solution;

rinsing the component at least one time to remove the cleaning solution;

dipping the component into a nickel bath to produce a nickel-plating having a thickness of approximately .35-2 mil-inch thick;

rinsing the nickel-plated component at least one time; and

electrostatically spraying a powder coating over the nickel-plating,

wherein the nickel-plating and powder coat produces a substantially corrosion and abrasion resistant component.

2. The process of claim 1, further comprising the steps of :

before the electrostatic spraying step, dipping the nickel-plated component in a chromium bath to produce a chromium plating having a thickness of substantially .0002-.1 mil-inch thick; and

rinsing the nickel-chromium plated component at least one time after the dipping the nickel-plated component in the chromium bath step.

3. The process of claim 2, wherein each of the rinsing steps is approximately 0.5-2 minutes.

4. The process of claim 2, further comprising the step of:

sealing the nickel-chromium plated component with a chemical sealer before the electrostatic spraying step; and

rinsing the chemical sealer from the nickel-chromium plated component.

5. The process of claim 2, further comprising the steps of:

drying the nickel-chromium plated component;

applying the powder coating after the drying step to the nickel-chromium plated component; and

after the drying step, curing the nickel-chromium plated component.

6. The process of claim 5, wherein the drying step includes heating the nickel-chromium plated component approximately 5-10 minutes, +/- 20%, in a temperature of about 325 degrees F, +/- 20%, and then cooling the nickel-chromium plated component.

7. The process of claim 2, wherein the applying a powder coating step takes approximately 1-2 minutes.

8. The process of claim 5, wherein in the curing step includes heating the nickel-chromium component to about 425 degrees F for about 15-20 minutes.

9. The process of claim 8, further includes cooling the nickel-chromium component.

10. The process of claim 2, wherein the applying the powder coating includes electrostatically spraying the powder coating to produce a thickness of about 3-5 mil-inch.

11. The process of claim 1, wherein cleaning the component step includes immersing the component in a caustic cleaner.

12. The process of claim 1, wherein the cleaning the component step includes immersing the component in a first electro cleaner.

13. The process of claim 12, wherein the cleaning step includes immersing the component in a second electro cleaner.

14. The process of claim 13, further comprising the step of immersing the component in an acid dip after the second electro cleaner step.

15. The process of claim 1, further comprising the step of:

before the electrostatically sealing step, sealing the nickel plated component with a chemical sealer; and

rinsing the sealed nickel plated component at least one time.

16. The process of claim 1, further comprising the steps of:

before the electrostatically spraying step, drying the nickel plated component by heating to a temperature of approximately 325 degrees F +/-20%, and then cooling the nickel plated component; and

after the electrostatically spraying step, curing the nickel plated sprayed component by heating to approximately 425 degrees F +/-20% and then cooling.

17. The process of claim 1, wherein the powder is applied to the nickel plated component to a thickness of about 3-5 mil-inch.

18. A process for plating a component for a shopping cart or carrying conveyance, the process comprising the steps of:

cleaning the component by immersion in a cleaning solution;

rinsing the component at least one time to remove the cleaning solution;

dipping the component into a nickel bath to produce a nickel-plated component having a nickel plating substantially .35-2 mil-inch thick; and dipping the nickel-plated component in a chromium bath to produce a nickel-chromium plated component having a chromium plating substantially .0002-.1 mil-inch thick.

19. The process of claim 18, further comprising the steps of:

sealing the nickel-chromium plating with a chemical sealer; and

rinsing the sealed nickel-chromium plating at least one time.

20. The process of claim 19, further comprising the steps of:

drying the nickel-chromium plated component;

applying a powder coating to the nickel-chromium plated component to provide a finish; and

curing the nickel-chromium plated and powder coated component.

21. The process of claim 20, wherein the drying step includes drying the nickel-chromium plated component approximately 5-10 minutes, +/- 20%, in a temperature of about 325 degrees F, +/- 20%, and cooling the nickel-chromium plated component.

22. The process of claim 20, wherein the applying a powder steps includes electrostatically spraying the powder coating to produce a powder coating thickness of about 3-5 mil-inch.

23. The process of claim 20, wherein in the curing step includes heating the nickel-chromium plated component to approximately 425 degrees F, +/- 20%, for approximately 15-20 minutes, +/- 20%, and then cooling the nickel-chromium plated component.

24. An apparatus for plating a component, comprising:

a means for cleaning the component by immersion in a cleaning solution;

a means for rinsing the component at least one time to remove the cleaning solution;

a means for dipping the component into a nickel bath to produce a nickel-plated component having a nickel plating substantially .35-2 mil-inch thick;

a means for rinsing the nickel-plated component at least one time,

a means for dipping the nickel-plated component in a chromium bath to produce a nickel-chromium plated component having a chromium plating substantially .0002-.1 mil-inch thick;

a means for rinsing the nickel-chromium plated component at least one time,

a means for sealing the nickel-chromium plated component with a chemical sealer;

a means for rinsing the sealed nickel-chromium plated component at least one time;

a means for drying the nickel-chromium plated component by heating;

a means for applying a powder coating to the nickel-chromium plated component to provide a finish; and

a means for curing the nickel-chromium plated and powder sprayed component.

25. The apparatus of claim 24, wherein the means for drying the nickel-chromium plated component is an oven capable of heating to a temperature of about 325 degrees F, +/- 20% for approximately 5-10 minutes, +/- 20%.

26. A shopping cart having one or more components, the one or more components of the shopping cart having a metal like structure with a nickel chromium plating and an electrostatic sprayed powder coating applied over the

nickel chromium plating, the nickel having a thickness in range of approximately .35-2 mil-inch thick, the chromium plating having a thickness in a range of approximately .0002-.1 mil-inch thick, and the powder coating having a thickness in a range of approximately 3-5 mil-inch.